(No Model.)

R. P. PEARSON.

BOTTLE FASTENER.

No. 342,382. Patented May 25, 1886.

Fig. 1.

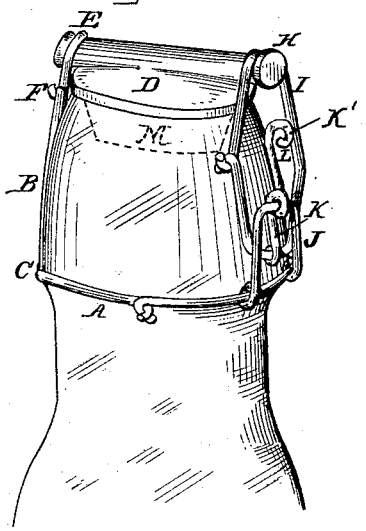


Fig. 2.

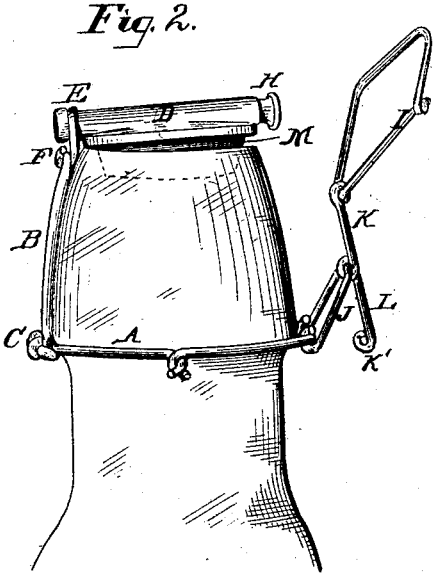


Fig. 3.

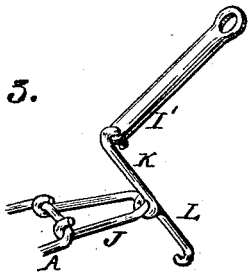
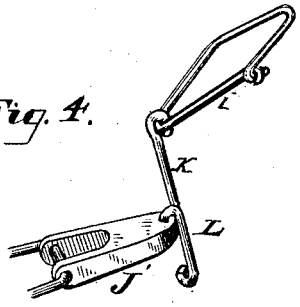


Fig. 4.



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BOTTLE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 342,382, dated May 25, 1886.

Application filed September 9, 1885. Serial No. 176,572. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. PEARSON, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Bottle-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part hereof.

The nature of my invention will fully appear from the following description and claims.

In the drawings, Figure 1 is a perspective view of the neck and head of a bottle provided with my improved stopper, the fastening parts of the device being made of bent wire, the stopper being represented as closed; Fig. 2, an elevation of the same, showing the fastening device loosed and the stopper sprung ready for opening; Fig. 3, a perspective view of a modification, showing the upper link or loop of the fastener made of a piece of pierced flat metal, the lower loop being of wire; Fig. 4, a similar view showing the lower link made of a piece of flat metal, and the upper one made of wire, forming a loop.

A is the neck-band formed of wire for economy of construction, though it may be of strip metal; B, a wire stay or brace, jointed to the neck-band at C at one end, and at the other end secured by a loop, E, to a lug or projection on the stopper D. This stay may be hooked into the edge of the stopper or secured thereto by other means which will suggest themselves to the mind of an ordinary skilled mechanic.

F is a joint or hinge in the stay B, to permit the stopper to fall or hang freely down beside the neck of the bottle when the latter is opened; I, a wire loop or link engaging with the lug H on the stopper D, to hold the stopper down; J, a lower loop or link hinged or jointed at its lower end to the neck-band A; I', Fig. 3, a flat metal loop or link, being a modification of wire link I, Figs. 1 and 2; J', Fig. 4, a flat metal lower link, being a modification of lower link, J, Figs. 1 and 2; K, a latch hinged between its ends to the upper part of lower link or loop, J, and provided with a lever end or extension, L. The other end of this latch is hinged at its other end to the lower part of link or loop I.

In the claim I shall call that end of latch K which is hinged to the lower end of link I the "lower end" of the latch, as it becomes the lower end when the stopper is closed on the bottle. (See Fig. 1.) The lower section, L, of latch K is terminated by a ring or loop, K', or other convenient handle, to facilitate opening the bottle when closed.

The form of link shown at I', Fig. 3, may be struck by a die out of sheet metal, the holes and link being struck out simultaneously. The form of link shown at J', Fig. 4, may be similarly struck out; but the small holes would afterward have to be drilled. If, however, it were made thinner, the ends clasping band A could be bent into the hinge form.

M is a rubber cushion secured to the lower surface of the body of the stopper and jamming slightly into the upper inner rim of the bottle when the stopper is closed.

It is obvious that the upper end of loop I may be hooked over so as to engage on the upper surface of the stopper, in which case lug H will be dispensed with; but I prefer the loop form shown for the sake of the spring resulting from the bowed sides and bent corners of the loop. In case I use the flat link I', I employ the spring or bowed loop J below; or in case the flat or rigid link J' is used, I employ the bent wire loop I above.

The operation is as follows: When the bottle is open, as in Fig. 2, the loop I is thrown over the lug H, and the lever end L of the latch K is raised. This lowers the end K and gradually forces the upper end of link J and the lower end of link I in toward the bottle. The lift of lever L is continued until the lower end, K, of the lever enters into the space inclosed by the link J, or the opening in the interior of this link, and passes out beyond the center fulcrum or joint of the lever or latch with the upper end of loop J. (See Fig. 1.) As will be apparent, the spring of cushion M, the spring of the bowed sides and bent corners of loop I, and the spring of the bent corners of loop J will all operate to hold the fastening devices in the position shown in Fig. 1. To open the bottle the motion of the lever L is simply reversed.

The loops I in Figs. 2 and 4 are intended to conform with the loop I in the last-named fig-

ure. The upper link shown in Fig. 3 is in practice of about the same length as that shown at I in Fig. 1, and the lower link in said Fig. 3 in practice possesses the same feature of outward curvature of the wire composing it as that of the link shown in Fig. 1. The object of this outward curvature is to obtain elasticity or spring of the link, and the links should be long enough when joined as in Fig. 1, to hold the stopper down closely at the closing-point of the latter, without involving such strain upon the links as would be liable to tear them or destroy their elasticity.

The lengths of the links and the outward curvature of the looped links necessary to attain the objects above mentioned will be evident to the mind of a skilled mechanic, particularly to that of one skilled in the art of making wire bottle-stopper fasteners.

What I claim as new is—

1. In a bottle-stopper, the combination of the neck-band A with the stay B, hinged to the band A at C, and secured to the stopper D at E, substantially as shown, said stay B being hinged or jointed at F, to permit the free fall, play, or hang of the stopper, projecting lug H, secured to the stopper, spring-loop I, engaging with lug H, stay J, hinged to the neck-band A at that side of the bottle-neck opposite to the stay B, and latch K, looped through an opening in stay J, with lever projection Z, the lower end of said latch being hinged to the lower end of spring-loop I, whereby by the raising of the outer end of the latch the spring-tension of the loop I will hold or lock the latch in place and secure the stopper, and the reversal of the said motion of the latch will release the tension on loop I and permit its removal from the lug H, to release the stopper, substantially as described.

2. In a bottle-stopper, the combination of the neck-band A with the stay B, hinged to said neck-band at C, and secured to the stopper D at E, substantially as shown, projecting lug H, secured to the stopper, spring-loop I, engaging with said lug, stay J, hinged to the neck-band A at that side of the bottle-neck opposite to the stay B, and latch K, looped through an opening in the upper part of stay J, and provided with lever projection or extension L, the lower end of said latch being hinged to the lower end of spring-loop I, whereby by the raising of the outer end of the latch the spring-tension of the loop I will hold the latch in place and secure the stopper, and the reversal of said motion of the latch will release the tension on loop I and permit its removal from lug H, to release the stopper, substantially as described.

3. In a bottle-stopper, the combination of the neck-band A with the stay B, hinged at C to said neck-band and secured to the stopper D at E, substantially as described, lug H, projecting from the stopper, arms or loops J and I, the former hinged to the band A, substantially as shown, and the latter adapted to engage by its upper end over the lug H, to hold the stopper down, spring-cushion M, and tumbling-latch K L, hinged between its ends to the upper end of lower arm or loop J and at its heel or lower end to the lower end of arm or loop I, whereby when the stopper is closed, as described, the spring of the cushion M will operate to lock the latch and hold the stopper closed, substantially as described.

4. In a bottle-stopper, the combination of the neck-band A with the stay B, hinged at C to said neck-band and secured to the stopper D at E, substantially as described, lug H, projecting from the stopper, hinged arms J and I, the former hinged to the band A, substantially as shown, and the latter adapted to engage over the lug H, to hold the stopper down, spring-cushion M, and tumbling-latch K L, hinged between its ends to the upper end of arm J and at its heel or lower end to the lower end of arm I, one of said arms, I or J, being a spring-loop intermediate between the band A and the lug H, operated by latch K L, to hold the stopper D down, substantially as described.

5. In a bottle-stopper, the combination of the neck-band A with the stay B, hinged at C to said neck-band and secured to the stopper D at E, substantially as described, arms J and I, the former hinged to the band A, substantially as shown, and the latter adapted to engage at its upper end with the stopper to hold the latter down, spring-cushion M on stopper D, and lock-latch K L, tumbling upwardly to close the stopper, hinged between its ends to the upper end of arm J and at its heel or lower end to the lower end of loop I, whereby when the stopper is closed the spring of the cushion M will operate to lock the latch and hold the stopper D closed, substantially as described.

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